REMARKS/ARGUMENTS

The Office Action mailed March 22, 2006 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. The claims presented for examination are: claims 1-7.

Claim Objection

In numbered paragraph 1 of the Office Action mailed March 22, 2006, Claims 1-3 were objected to because of the phrase in claim 1, line 12, "to said actuator to said tube" appears to be a typographical error.

Applicants have amended claim 1 as follows: "~~to said actuator~~ to said tube." Applicants believe this amendment overcomes the objection to claims 1-3 stated in numbered paragraph 1 of the Office Action mailed March 22, 2006 and that a complete response to this objection has been provided.

35 USC 112, Second Paragraph, Rejection

In numbered paragraph 2 of the Office Action mailed March 22, 2006, claims 1-7 were rejected under 35 U.S.C. §112, second paragraph, because "the valve is described as being connected to the actuator, but in the disclosure, the valve 109 is part of the actuator 102."

Applicants have amended the independent claims 1 and 4 to clarify that, "wherein said actuator (means) includes valving (means) operatively connected to said tube and operatively connected to said piston plunger, said valving (means) transmitting said pneumatic force to said tube and piston plunger."

Applicants believe this amendment overcomes the rejection of claims 1-7 stated in numbered paragraph 2 of the Office Action mailed March 22, 2006 and that a complete response to this objection has been provided.

35 USC 112, First Paragraph, Rejection

In numbered paragraph 3 of the Office Action mailed March 22, 2006, claims 1-7 were rejected under 35 U.S.C. §112, first paragraph, because "there is no description of an actuator connected to a valve, but rather and actuator comprising a valve."

Applicants have amended the independent claims 1 and 4 to clarify that, "wherein said actuator (means) includes valving (means) operatively connected to said tube and operatively connected to said piston plunger, said valving transmitting said pneumatic force to said tube and piston plunger."

Applicants believe this amendment overcomes the rejection of claims 1-7 stated in numbered paragraph 3 of the Office Action mailed March 22, 2006 and that a complete response to this objection has been provided.

Drawings Objection

In numbered paragraph 4 of the Office Action mailed March 22, 2006, the drawings were object to because the drawings did not show the original claim element "the valve connected to the actuator."

Applicants have amended the claims so that the amended claims no longer claim, "the valve connected to the actuator." In the amended claims the "actuator (means) includes valving (means) operatively connected to said tube and operatively connected to said piston plunger." The features of the amended claims are shown in the drawings.

Applicants believe this amendment overcomes the objection to the drawings stated in numbered paragraph 4 of the Office Action mailed March 22, 2006 and that a complete response to this objection has been provided.

Applicants' Claimed Invention

Applicants' claimed invention is illustrated in Applicants' original drawing FIG. 1 reproduced below.

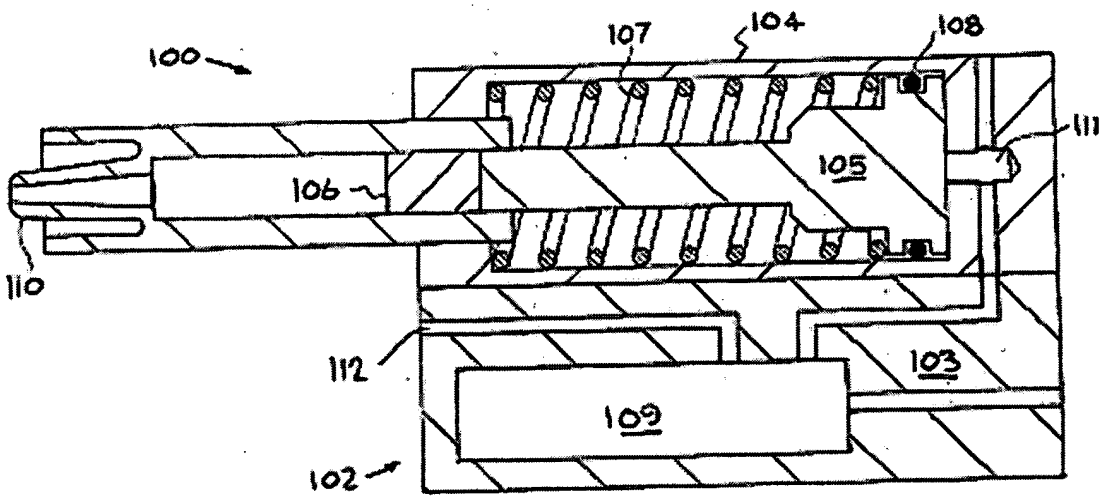


FIG. 1

Portions of Applicants' original specification describe FIG. 1, as follows:

[0016] Referring now to FIG. 1, a pneumatically actuated dispensing system constructed in accordance with the presenting invention is illustrated. The dispensing system is designated generally by the reference numeral 100. The dispensing system 100 addresses the increasing need for systems that perform biological or chemical processing and/or analysis. These systems can be complex and can require the dispensing or manipulation of several different liquids or gases for a given process and/or analysis. The dispensing system 100 has uses in systems for performing biological or chemical analysis. Examples include bio-warfare terrorism agent detection, automated laboratory biological and chemical analysis, automated laboratory biological processes, and automated laboratory chemical processes. There is also a growing need for compact systems for automated biological or chemical processes performed in the laboratory and industry. The

dispensing system 100 addresses the increasing need for compact systems that are portable or remotely operated and perform biological or chemical processing and/or analysis.

[0017] The dispensing system 100 comprises a dispensing component 101, an actuator component 102, and a valving component 103. These components will be described in greater detail below. The dispensing system 100 provides a precise amount of fluid for biological or chemical processing and/or analysis. The dispensing system 100 can be used as an individual dispensing pump to dispense one fluid or gas or can be arranged in an array of dispensing pumps to dispense several or many different liquids or gases. Each individual dispensing system can dispense an appropriate preselected precise volume of liquid or gas.

[0018] The Dispensing Component 101--In its simplest form the dispensing component 101 comprises a tube 104 with a rod or plunger 106 and piston 105 that slide down the inside diameter of the tube 104. A spring 107 biases the piston with its associated plunger upward in the tube 104. An "O" ring 108 provides a sliding seal between the piston 105 and the tube 104. The piston 105 is propelled downward by increasing the pressure on one side of the piston 105 with respect to the spring force on the other. This is accomplished by the introduction of pneumatic pressure to one side of the piston 105 through the chamber 111. The piston 105 is attached to the plunger 106 of the dispensing component 101 by a rod or other component thereby creating movement of the plunger 106 with the piston 105. A connection 110 on the tube 104 provides the means for dispensing fluids or gases to the desired unit in the particular process and/or analysis involved. The connection 110 transfers a precise amount of fluid from the tube 104 for biological or chemical processing and/or analysis.

[0022] The Actuator Component 102--The actuator component 102 comprises a solenoid valve 109 with an internal solenoid piston sliding in a cylinder. The solenoid piston has a gas tight sliding seal to the walls of the cylinder. The solenoid piston can be either pneumatically powered in both directions by switching the pressure from one side of the solenoid piston to the other and venting the opposite side. It can also be pneumatically powered in one direction and returned by the force of a mechanical spring. A source of pneumatic pressure is introduced through the passage connected to the solenoid valve 109.

35 USC 102 Rejection – Gordon Reference

In numbered paragraph 9 of the Office Action mailed March 22, 2006, claims 1-2 and 4-6 were rejected under 35 U.S.C. §102(b) as being anticipated by the Gordon reference (US Patent No. 5,540,889). FIG. 1A of the Gordon reference is reproduced and described below.

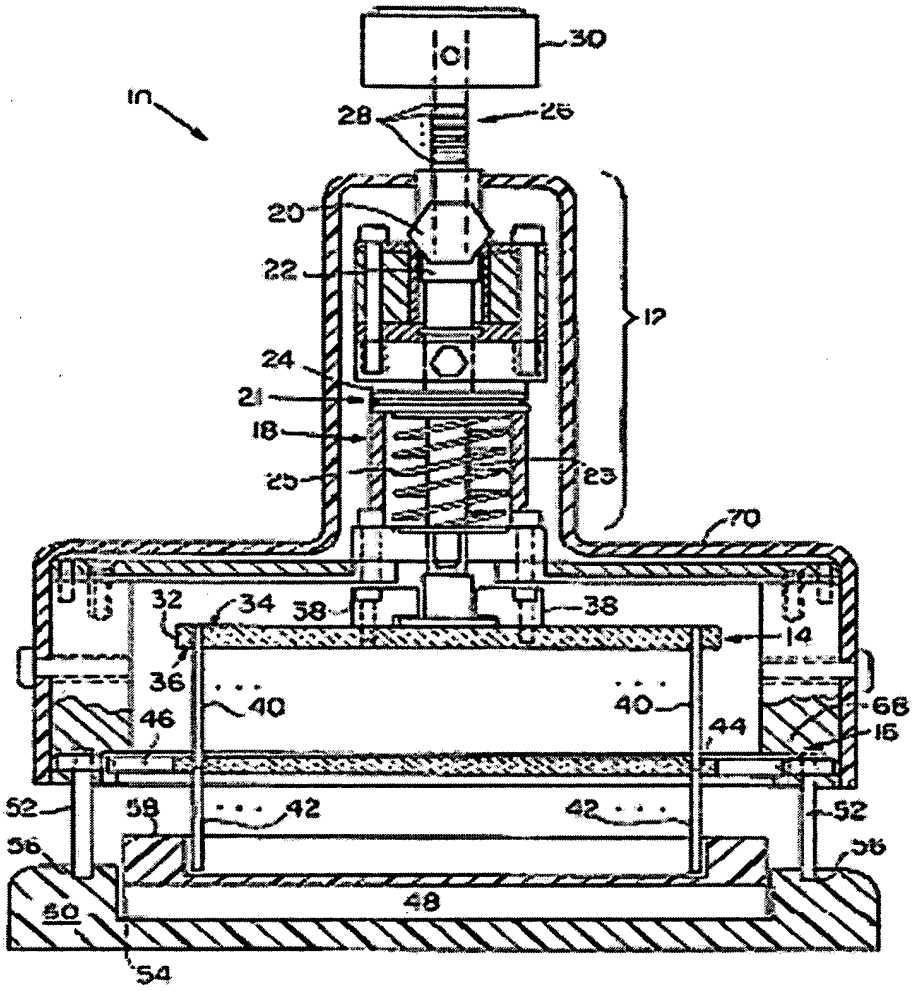


FIG. 1A

In the Gordon reference shown in FIG. 1A, "a pipetter system 10 includes a main shaft area 12, an upper plate assembly 14 and a lower plate assembly 16. The main shaft area 12 is formed of an actuator 18 and a repositionable stop 24. As described below in greater detail, the actuator 18 is coupled to the upper plate assembly 14 and moves the upper plate assembly 14 relative to the lower plate assembly 16, the lower plate assembly 16 remaining stationary. In particular, the actuator 18 moves the upper plate assembly 14 through planes parallel with the lower plate assembly 16. Movement of the upper plate assembly 14 away from

the lower plate assembly 16 collects sample fluid in a syringe-like drawing manner through a plurality of pipettes in parallel (i.e., simultaneously) as described below. Movement of the upper plate assembly 14 closer to the lower plate assembly discharges collected sample fluid as heretofore unachieved by the prior art and mentioned above.

In moving upward in FIG. 1a, the pneumatic cylinder 18 stops at the repositionable stop 24. The repositionable stop is formed of a fine pitch screw 26 which has markings 28 along its shaft. The user tightens or loosens the screw 26 until a desired marking 28 on the screw shaft is shown. The markings 28 provide an indication of the amount of sample liquid which will be drawn by the actuator 18 stopping at that position of stop 24. Preferably, the markings 28 provide 5 ml increments between a total range of about 20 ml to about 50 ml (for example) to be obtained. In addition, the top or handle portion 30 of the screw 26 provides pointers 31 for indicating fractions of a turn (i.e., less than a full revolution) of the screw 26. Thus, the handle pointers 31 in combination with the screw shaft markings 28 provide an indication to the user of the amount of sample fluid which will be obtained upon the actuator 18 operating to the position set by the repositionable stop 24."

Gordon Reference Does Not Anticipate Amended Claims 1-2 and 4-6

Applicant has amended independent claims 1 and 4 to change the preamble from a "comprising" preamble to a "consisting of" preamble.

A "comprising" preamble is what is known as an open term. In effect, comprising is a shorthand way of saying "including the following elements but not excluding others." For example, a combination "comprising A + B" covers the combination A + B + C.

On the other hand, a "consisting of" preamble is a closed term. A combination "consisting of A + B" does not cover the combination A + B + C.

Applicants' invention defined by amended claims 1 and 4 provides a specific combination of elements "consisting of" the specific combination of elements enumerated in amended claims 1 and 4. This specific combination of elements is not found in the cited Gordon reference

The Gordon reference both (1) fails to include elements of Applicants' amended claims 1 and 4 and (2) includes elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4.

The standard for a 35 U.S.C. §102 rejection is stated in *RCA Corp. v. Applied Digital Systems, Inc*, 221PQ 385, 388 (d. Cir. 1984) "Anticipation is established only when a single prior art reference discloses, either expressly or under principles of inherency, each and every element of a claimed invention." Applicant points out that the following elements of Applicants' amended claims 1 and 4 are not found in the Gordon reference:

> "an actuator (means) operatively connected to said tube and piston plunger for providing said pneumatic force to said piston plunger, wherein said actuator includes valving (means) operatively connected to said tube and operatively connected to said piston plunger, said valving transmitting said pneumatic force to said tube and piston plunger."

Since the elements described above are not found in the Gordon reference, the Gordon reference would not support a 35 U.S.C. §102(b) rejection.

The Gordon reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4. For example, the following elements of the Gordon reference are not found in Applicants amended independent claims 1 and 4:

> "an upper plate assembly 14," and

"a lower plate assembly 16," and

"a repositionable stop 24," and

"repositionable stop is formed of a fine pitch screw 26," and

"desired marking 28 on the screw shaft."

Since the Gordon reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4, the Gordon reference would not support a 35 U.S.C. §102(b) rejection.

35 USC 103 Rejection – Gordon Reference

In numbered paragraph 10 of the Office Action mailed March 22, 2006, claims 3 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Gordon reference (US Patent No. 5,540,889). Applicants have cancelled claims 3 and 7.

35 USC 102 Rejection – Saidman Reference

In numbered paragraph 11 of the Office Action mailed March 22, 2006, claims 1-2 and 4-6 were rejected under 35 U.S.C. §102(b) as being anticipated by the Saidman reference (US Patent Application No. 2004/0076551). FIG. 5 of the Saidman reference is reproduced and described below.

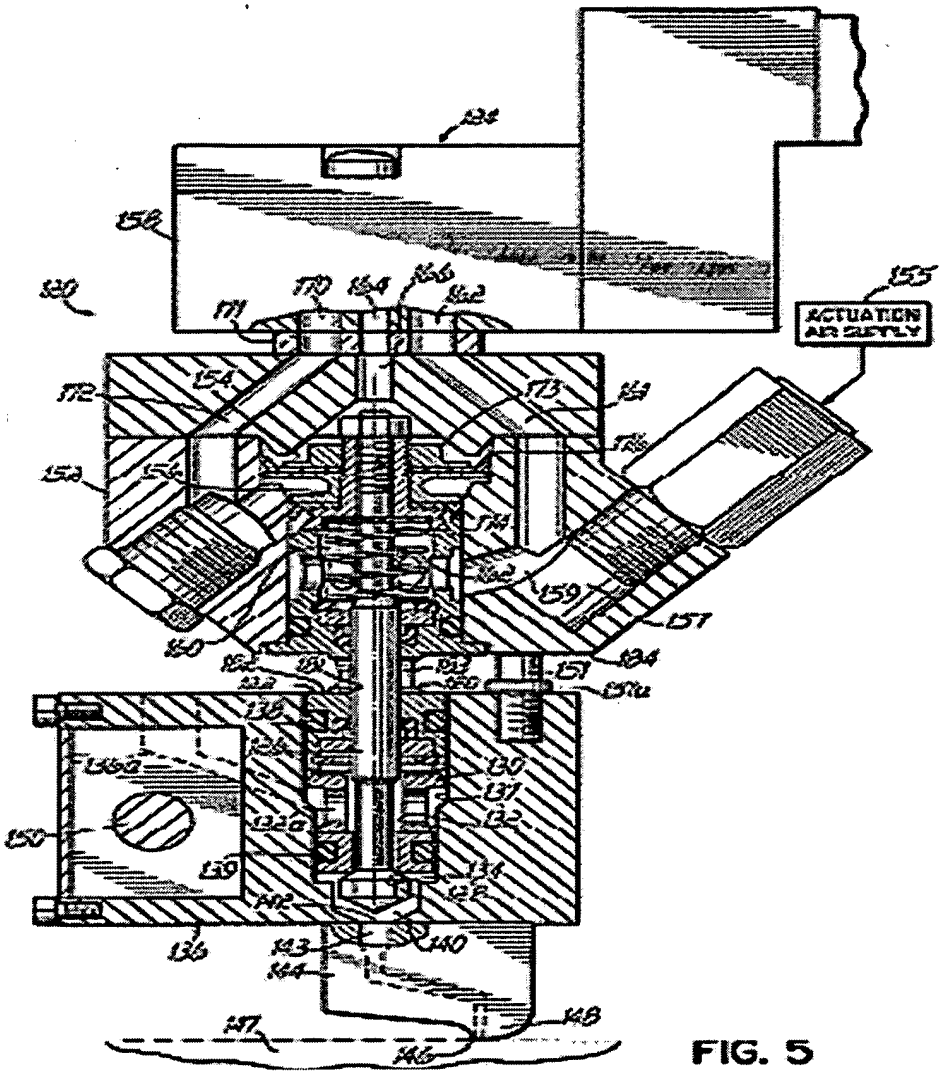


FIG. 5

The Saidman reference shows:

[0002] The present invention generally relates to liquid dispensing and, more particularly, to liquid dispensing modules for dispensing heated liquids onto a surface of a substrate.

[0059] With reference to FIGS. 5 and 6, a liquid dispensing module **120** constructed in accordance with the principles of the present invention includes a dispenser body **122** and an actuator **124**. The liquid dispensing module **120** is specifically adapted for dispensing a heated liquid, such as a molten thermoplastic hot melt adhesive. In particular, the liquid dispensing module **120** is configured to be actuated between an open position (FIG. 6), in which heated liquid is dispensed, and a closed position (FIG. 5), in which the flow of heated liquid is discontinued. The dispenser body **122** is substantially similar to the dispenser body disclosed in U.S. Pat. No. 6, 164,568, which

was incorporated by reference above in its entirety, and operates in a substantially similar manner for cycling between the open and closed positions of the liquid dispensing module **120**.

[0060] The dispenser body **122** includes an elongated valve stem **126**, a valve plug **128** mounted at one end of the valve stem **126**, and a flow- directing insert **130** having a supply channel **132** and a valve seat **134**. The flow-directing insert **130**, a portion of the valve stem **126**, and the valve plug **128** are received within a stepped-diameter bore **137** formed within a liquid distribution manifold **136** having a flow passageway **136*a*** for directing a flow of heated liquid to the supply channel **132** . The valve stem **126** and valve plug **128** are linearly movable relative to the valve seat **134** for providing an open position (FIG. 6) by creating an annular opening between the plug **128** and seat **134** and a closed position (FIG. 7) by engaging the plug **128** with seat **134**. The flow-directing insert **130** includes a pair of seals **138** and **139** positioned in respective ones of a spaced-apart pair of circumferential glands. An inlet **132*a*** of the supply channel **132** is fluidically coupled with flow passageway **136*a***. The supply channel **132** includes a chamber **140** into which the valve plug **128** extends and an outlet **142** through which heated liquid flows into a passageway **143** in a nozzle **144**. The nozzle **144** has an elongated discharge outlet **146** formed in a mouthpiece **148** . The discharge outlet **146** is fluidically coupled with passageway **143** for dispensing the heated liquid onto a substrate **147**.

[0061] The liquid distribution manifold **136** includes a heater **150** that converts electrical energy into heat energy for heating manifold **136**. The heater **150** is controlled by a heater controller (not shown), which may rely on feedback from a temperature sensor (not shown) for regulating the electrical power provided to heater **150**. The liquid distribution manifold **136** also heats the dispenser body **122** by heat transfer so that heated liquid within body **122** is maintained at a desired application temperature. A stud **151** provides an additional mechanical interconnection with liquid distribution manifold **128** for securing the actuator **124** to the manifold **136**.

[0062] With continued reference to FIGS. 5 and 6, the actuator **124** includes a two-piece air piston housing **152**, an air cavity **154**, an air piston **156** attached to an end of the valve stem **126** opposite the end carrying valve plug **128**, and a solenoid valve **158**. The air piston housing **152** has an inlet passageway **157** that is adapted to be fluidically coupled with an actuation air supply **155**. The inlet passageway **157** includes a first channel **159** leading to an air chamber **160** of an air spring return and a second channel **161** that leads to a supply duct **162** of the solenoid valve **158**. The air chamber **160** surrounds a portion of the valve stem **126**. A biasing element **162**, illustrated in FIG. 5 as a compression coil spring, is positioned in the air chamber **160** and helically surrounds the portion of the valve stem **126** in chamber **160**.

[0063] The solenoid valve **158** has an access duct **164** in fluid communication with an air passageway **166** in the air piston housing **152**. The air passageway **166** leads to air cavity

154 , which has a variable air volume that is a function of the position of the air piston **156**. The solenoid valve **158** also has an exhaust duct **170** which is fluidically coupled with an exhaust passageway **172** in the air piston housing **152**. When the access duct **164** is in fluid communication with the first channel **159** of the inlet passageway **157**, pressurized actuation air is provided through the air passageway **166** to the air cavity **154**. When the access duct **164** is in fluid communication with the exhaust duct **170** , pressurized actuation air is exhausted from the air cavity **154** via air passageway **166**. When the air pressure in the air cavity **154** is at 0 p.s. i.a., the liquid dispensing module **120** is in a closed position and the air cavity **154** has its minimum air cavity volume. Solenoid valve **158** is similar in construction to solenoid valve **71**.

[0064] With continued reference to FIGS. 5 and 6, the air cavity **154** has an initial air volume, including the volume of access duct **164** and air passageway **166**, when the liquid dispensing valve **120** is in the closed position. Solenoid valve **158** is attached to the air piston housing **152**. A thin intervening thermal-insulating barrier **171** is positioned between the air piston housing **152** and the solenoid valve **158**. Thermal-insulating barrier **171** provides a seal that prevents leakage of actuation air between the air piston housing **152** and the solenoid valve **158**. Passageways are provided in thermal-insulating barrier **171** that join second channel **161** with supply duct **162**, access duct **164** with air passageway **166**, and exhaust duct **170** with exhaust passageway **172** . At least partially as a result of the direct attachment between the solenoid valve **158** and the air piston housing **152**, the initial air volume of the air cavity **154** may be reduced to a value less than about 2170 mm^3 and, in particular, less than about 1500 mm^3. The reduction in the initial air volume of the air cavity **154** reduces the time required to pressurize the air cavity **154** to an air pressure effective to overcome stiction and initiate movement of the air piston **156**.

[0065] The air piston **156** has a first face **173** of a first effective surface area that is exposed to the environment within the air cavity **154**. When pressurized air is applied to the air cavity **154**, an actuation force is applied to the air piston **156** given by the product of the air pressure within air cavity **154** and the first effective area of the first face **173**. The air piston **156** has a second face **174** of a second effective area that is exposed to the pressurized air within the air chamber **160**. The effective area of the second face **174** is significantly less than the effective area of the first face **173** so that the force applied to first face **173** exceeds the force applied to the second face **174** as the air pressure in air cavity **154** increases. As a result, the air piston **156** moves when the solenoid valve **158** applies a sufficient air pressure of actuation air to the air cavity **154**. The air piston **156** has a first seal **176** that seals the first face **173** with the inner wall of the air cavity **154** and a second seal **177** that seals the second face **174** with the inner wall of the air chamber **160**.

[0066] With continued reference to FIGS. 5 and 6, a spacer **180** separates the air piston housing **152** from the dispenser body **122** and the liquid distribution manifold **136**. Valve

stem **126** projects through a central throughbore **181** in spacer **180**. A throughbore **183** extends through transversely through the thickness of the spacer **180** and is aligned orthogonal to the central throughbore **181**. The presence of throughbore **183** reduces the effective cross- sectional area of the spacer **180** averaged over the distance between a face **182** of the dispenser body **122** and a confronting face **184** of air piston housing **152**, which is substantially equal to the length of the spacer **180**. The average effective cross-sectional area of the spacer **180** is less than the surface area of either face **182** or face **184**, which would otherwise be in abutting contact if spacer **180** were not intervening. The reduced effective cross-sectional area of the spacer **180** contributes to reducing the conduction of heat from face **182** to face **184**. The spacer **180** cooperates with the thermal-insulating barrier **171** to thermally isolate the solenoid valve **158** against the transfer of heat from the liquid distribution manifold **136** and the dispenser body **122**.

Saidman Reference Does Not Anticipate Amended Claims 1-2 and 4-6

Applicant has amended independent claims 1 and 4 to change the preamble from a "comprising" preamble to a "consisting of" preamble.

A "comprising" preamble is what is known as an open term. In effect, comprising is a shorthand way of saying "including the following elements but not excluding others." For example, a combination "comprising A + B" covers the combination A + B + C.

On the other hand, a "consisting of" preamble is a closed term. A combination "consisting of A + B" does not cover the combination A + B + C.

Applicants' invention defined by amended claims 1 and 4 provides a specific combination of elements "consisting of" the specific combination of elements enumerated in amended claims 1 and 4. This specific combination of elements is not found in the cited Saidman reference

The Saidman reference both (1) fails to include elements of Applicants' amended claims 1 and 4 and (2) includes elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4.

The standard for a 35 U.S.C. §102 rejection is stated in *RCA Corp. v. Applied Digital Systems, Inc*, 221PQ 385, 388 (d. Cir. 1984) "Anticipation is established only when a single prior art reference discloses, either expressly or under

principles of inherency, each and every element of a claimed invention." Applicant points out that the following elements of Applicants' amended claims 1 and 4 are not found in the Saidman reference:

> "An apparatus for delivering a predetermined amount of a fluid for biological or chemical processing and/or analysis, consisting of:"
>
> "a tube; a piston plunger positioned to slide inside of said tube for dispensing said predetermined amount of a fluid for biological or chemical processing and/or analysis, said piston plunger responsive to a pneumatic force," or
>
> "a connector operatively connected to said tube for transferring said predetermined amount of a fluid for biological or chemical processing and/or analysis," or
>
> "an actuator operatively connected to said tube and piston plunger for providing said pneumatic force to said piston plunger; wherein said actuator includes valving operatively connected to said tube and operatively connected to said piston plunger, said valving transmitting said pneumatic force to said tube and piston plunger."

Since the elements described above are not found in the Saidman reference, the Saidman reference would not support a 35 U.S.C. §102(b) rejection.

The Saidman reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4. For example, the following elements of the Saidman reference are not found in Applicants amended independent claims 1 and 4:

> "liquid dispensing modules for dispensing heated liquids onto a surface of a substrate," or
>
> "a liquid distribution manifold **136** having a flow passageway **136*a*** for directing a flow of heated liquid to the supply channel **132**," or

"supply channel **132** includes a chamber **140** into which the valve plug **128** extends and an outlet **142** through which heated liquid flows into a passageway **143** in a nozzle **144,**" or

"nozzle **144** has an elongated discharge outlet **146** formed in a mouthpiece **148,**" or

"passageway **143** for dispensing the heated liquid onto a substrate **147,**" or

"liquid distribution manifold **136** includes a heater **150,**" or

"heater **150** is controlled by a heater controller," or

"a temperature sensor for regulating the electrical power provided to heater **150,**" or

"stud **151** provides an additional mechanical interconnection with liquid distribution manifold **128** for securing the actuator **124** to the manifold **136,**" or

"a two-piece air piston housing **152,** an air cavity **154,** an air piston **156,**" **or**

"solenoid valve **158** has an access duct **164** in fluid communication with an air passageway **166** in the air piston housing **152,**" or

"air passageway **166** leads to air cavity **154,**" or

"first channel **159** of the inlet passageway **157,** pressurized actuation air is provided through the air passageway **166** to the air cavity **154,**" or

"Solenoid valve **158** is similar in construction to solenoid valve **71,**" or

"thin intervening thermal-insulating barrier **171** is positioned between the air piston housing **152** and the solenoid valve **158,**" **or**

"Passageways are provided in thermal- insulating barrier **171** that join second channel **161** with supply duct **162,** access duct

164 with air passageway **166**, and exhaust duct **170** with exhaust passageway **172," or**

"air piston **156** has a first face **173** of a first effective surface area that is exposed to the environment within the air cavity **154**."

Since the Saidman reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4, the Saidman reference would not support a 35 U.S.C. §102(b) rejection.

35 USC 103 Rejection – Saidman Reference

In numbered paragraph 12 of the Office Action mailed March 22, 2006, claims 3 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Saidman reference (US Patent Application No. 2004/0076551). Applicants have cancelled claims 3 and 7.

35 USC 102 Rejection – Bienert Reference

In numbered paragraph 13 of the Office Action mailed March 22, 2006, claims 1-7 were rejected under 35 U.S.C. §102(b) as being anticipated by the Bienert reference (US Patent Application No. 2001/0019845). Applicants have cancelled claims 3 and 7.

FIG. 3 of the Bienert reference is reproduced and described below.

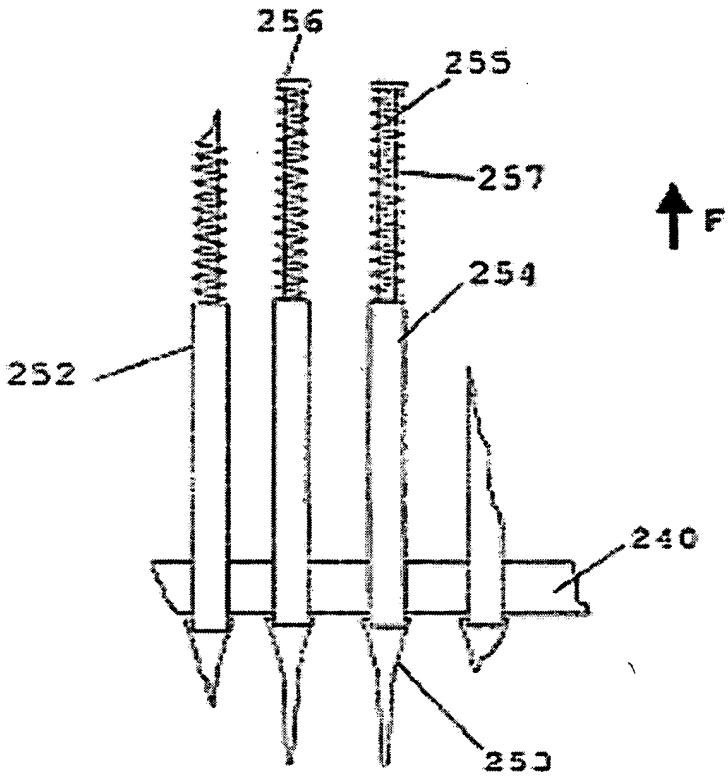


Fig.3

The Bienert reference shows:

[0046] In FIG. 3 partial views of details relating to how the micropipettes are attached in the mounting block **300** are shown. Each micropipette **252**consists of a cylinder **254** with the pipette tip **253** at one end and the activating pin **255** (end of the pipette piston) at the other end. Inside of the cylinder **254**, the pipette piston is retracted by a piston spring between the upper cylinder end and lower piston end. A pin spring **257** slightly biased in the basic position is provided between the end support **256** of the pipette piston **255** and the cylinder **254**. In the embodiment of the invention shown on FIG. 3, the cylinders **254** are securely attached to the carrier plate **240**. In the basic position, the pipette piston **255** is completely retracted by spring force (arrow F), thereby providing for a large pipetting volume in the cylinder. When the accompanying actuating element is actuated (see FIG. 2), a pneumatic cylinder of the actuating matrix **210** presses an actuating needle **220** to the end support **256**. The pneumatic cylinder works against the spring force of the pin spring **257** and the internal piston spring, and pushes the pipette piston **255** toward the pipette tip. When removing the working pressure from the pneumatic cylinder, the pipette piston **255** returns again under the action of to the pin and piston springs **257**. When the metering

head is used as intended, these movements of the pipetting piston **255** between the basic state and the tensioned state are used for taking a sample from a sample container or effecting the corresponding sample release.

Bienert Reference Does Not Anticipate Amended Claims 17

Applicant has amended independent claims 1 and 4 to change the preamble from a "comprising" preamble to a "consisting of" preamble.

A "comprising" preamble is what is known as an open term. In effect, comprising is a shorthand way of saying "including the following elements but not excluding others." For example, a combination "comprising A + B" covers the combination A + B + C.

On the other hand, a "consisting of" preamble is a closed term. A combination "consisting of A + B" does not cover the combination A + B + C.

Applicants' invention defined by amended claims 1 and 4 provides a specific combination of elements "consisting of" the specific combination of elements enumerated in amended claims 1 and 4. This specific combination of elements is not found in the cited Bienert reference

The Bienert reference both (1) fails to include elements of Applicants' amended claims 1 and 4 and (2) includes elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4.

The standard for a 35 U.S.C. §102 rejection is stated in *RCA Corp. v. Applied Digital Systems, Inc*, 221PQ 385, 388 (d. Cir. 1984) "Anticipation is established only when a single prior art reference discloses, either expressly or under principles of inherency, each and every element of a claimed invention." Applicant points out that the following elements of Applicants' amended claims 1 and 4 are not found in the Bienert reference:

> "An apparatus for delivering a predetermined amount of a fluid for biological or chemical processing and/or analysis, consisting of:"

"a tube; a piston plunger positioned to slide inside of said tube for dispensing said predetermined amount of a fluid for biological or chemical processing and/or analysis, said piston plunger responsive to a pneumatic force," or

"a connector operatively connected to said tube for transferring said predetermined amount of a fluid for biological or chemical processing and/or analysis," or

"an actuator operatively connected to said tube and piston plunger for providing said pneumatic force to said piston plunger; wherein said actuator includes valving operatively connected to said tube and operatively connected to said piston plunger, said valving transmitting said pneumatic force to said tube and piston plunger."

Since the elements described above are not found in the Bienert reference, the Bienert reference would not support a 35 U.S.C. §102(b) rejection.

The Bienert reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4. For example, the following elements of the Bienert reference are not found in Applicants amended independent claims 1 and 4:

"Each micropipette **252,**" or

"cylinder **254** with the pipette tip **253** at one end," or

"activating pin **255,**" or

"the cylinders **254** are securely attached to the carrier plate **240,**" or

"a pneumatic cylinder of the actuating matrix **210** presses an actuating needle **220** to the end support **256,**" **or**

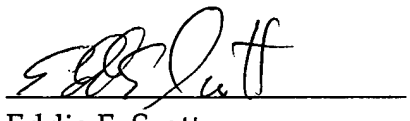
"metering head."

Since the Bienert reference includes many elements in addition to the specific combination of elements of Applicants' amended claims 1 and 4, the Bienert reference would not support a 35 U.S.C. §102(b) rejection.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated March 22, 2006 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



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Livermore, California
Dated: June 16, 2006